A novel strategy for performing endoscopic submucosal dissection for circumferential superficial esophageal neoplastic lesions with kissing traction

Endoscopic submucosal dissection (ESD) is a widely utilized procedure for early esophageal cancer and precancerous lesions. However, it remains technically challenging and time consuming for circumferential lesions. Numerous studies have utilized various techniques for improving the efficacy of ESD in the treatment of esophageal circumferential lesions [1–3]. Herein, we propose a novel approach for improving ESD for esophageal peripheral lesions, termed the “kissing traction technique” (KT-ESD).

Over 3 years, six patients (four male, two female; mean age 62.5 years) with circumferential superficial esophageal neoplastic lesions underwent KT-ESD. Informed consent for the procedure was signed by all patients before the procedure intervention.

The steps of KT-ESD were as follows

1) Esophageal iodine staining (Fig. 1a).
2) Marking the lesion.
3) Marking a circumferential incision on the anal and oral sides of the lesion (0.5 cm away from the lesion).
4) Dissection to reveal the mucosal flap from the oral side of the lesion (Fig. 1b).
5) Using two legs of titanium clips to clamp the two kissing mucosal flaps before traction (Fig. 1c, d), so that only one traction is needed to pull up the whole lesion.
6) Complete dissection along the submucosa.
7) Injection of triamcinolone acetonide solution on the wound; postoperative oral steroids were administered to prevent stenosis.

The length of the lesions ranged from 5.0 to 9.5 cm, with operation times ranging from 55 to 92 minutes (Table 1). None of the patients experienced intraoperative or postoperative bleeding or perforation. No recurrence was observed in subsequent follow-up. During the 3–30 months of postoperative follow-up, two of the six patients developed esophageal stenosis; however, the stenosis was successfully relieved following two to three balloon dilation procedures.

In conclusion, KT-ESD demonstrated a significant improvement in dissection efficiency for peripheral esophageal lesions, without an increase in complications.
Table 1 Characteristics of six patients undergoing endoscopic submucosal dissection with kissing traction.

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age</th>
<th>Location*</th>
<th>Longitudinal diameter, cm</th>
<th>Macroscopic type</th>
<th>Operative time, minutes</th>
<th>Adverse events</th>
<th>Pathological type</th>
<th>Follow up, months</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>69</td>
<td>Middle and inferior</td>
<td>6</td>
<td>IIb</td>
<td>65</td>
<td>No</td>
<td>Intramucosal cancer</td>
<td>3</td>
</tr>
<tr>
<td>F</td>
<td>56</td>
<td>Middle</td>
<td>5</td>
<td>IIb</td>
<td>55</td>
<td>Stenosis</td>
<td>High grade intraepithelial neoplasia</td>
<td>5</td>
</tr>
<tr>
<td>F</td>
<td>64</td>
<td>Middle and inferior</td>
<td>6.5</td>
<td>IIb + IIa</td>
<td>70</td>
<td>No</td>
<td>Intramucosal cancer</td>
<td>15</td>
</tr>
<tr>
<td>M</td>
<td>56</td>
<td>Middle and inferior</td>
<td>9.5</td>
<td>IIb + IIa</td>
<td>92</td>
<td>Stenosis</td>
<td>Intramucosal cancer</td>
<td>25</td>
</tr>
<tr>
<td>M</td>
<td>60</td>
<td>Middle and inferior</td>
<td>7</td>
<td>IIb</td>
<td>80</td>
<td>No</td>
<td>High grade intraepithelial neoplasia</td>
<td>12</td>
</tr>
<tr>
<td>M</td>
<td>70</td>
<td>Middle and inferior</td>
<td>5</td>
<td>IIb</td>
<td>60</td>
<td>No</td>
<td>Intramucosal cancer</td>
<td>30</td>
</tr>
</tbody>
</table>

*Superior, middle, and inferior of the esophageal.

References


Bibliography

Endoscopy 2024; 56: E669–E670
DOI 10.1055/a-2344-7717
ISSN 0013-726X
© 2024, The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution License, permitting unrestricted use, distribution, and reproduction so long as the original work is properly cited (https://creativecommons.org/licenses/by/4.0/).

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany